FLUID MECHANICS

1	Course Title:	FLUID MECHANICS	
2	Course Code:	FZK2403	
3	Type of Course:	Optional	
4	Level of Course:	First Cycle	
5	Year of Study:	2	
6	Semester:	3	
7	ECTS Credits Allocated:	5.00	
8	Theoretical (hour/week):	3.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	There is no course prerequisite	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. SERTAN KEMAL AKAY	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Prof. Dr. S. Kemal AKAY E-mail: kakay@uludag.edu.tr İş tel: 0 224 29 41 719 Adres: Uludağ Üniversitesi Fen Edebiyat Fakültesi Fizik Bölümü 16059 Görükle Kampüsü Bursa	
17	Website:		
18	Objective of the Course:	Basic properties of fluids (surface tension, capillary, cohesion-adhesion forces, etc.) and determine the various factors of the static fluid changes	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Understands the differences according to different items of fluids
		2	The behavior of the fluid can be expressed on a daily basis in their daily life
		3	calculate the pressure for fluids
		4	Behavioral differences between the fluids and the effects of stagnant or flowing fluids can comprehend
		5	Interpret the surrounding formations of Pascal and Archimedes' principle-based on applications
		6	Sees the concept of ideal fluid facilities created by science
		7	Stokes describes the flow of blood in your veins, and the Van der Waals equation with Poiseuille behavior and learn the properties of real fluid
		8	
		9	
		10	
21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	The concept of the fluid, the fluid properties and effects	

2	The basic principles of hydrostatics and stagnant pressure on the fluid	
3	Pressure change with depth and problem solving	
4	Pascal, Archimedes principles and applications	
5	Fluid dynamics, the concept of ideal fluid	
6	Flow lines, Continuity and Bernoulli equations	
7	Applications of Bernoulli equation	
8	Characteristics of laminar flows and whirlpool	
9	The actual fluid concept and differences in ideal definition	
10	Repeating courses and midterm exam	
11	Pure liquid flow, Poiseuille, and Stokes' law practices	
12	Flow of gases, Van der Waals equation and its applications	
13	Impulse, Impulse and practices of conservation	
14	One and two-dimensional flows of ideal and real fluids	

22	Textbooks, References and/or Other Materials:	1. “ Fundamentals of Physics”, David Halliday, Robert Resnick, (2008), Wiley

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	14	3.00	42.00
Homeworks	14	4.00	56.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	2.00	2.00
Others	0	0.00	0.00
Final Exams	1	2.00	2.00
Total Work Load			144.00
Contribution of Final Exam to Success Grade	50.00		4.80
ECTS Credit of the Course			5.00

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Quiz	0	0.00
Final Exam	1	50.00
Contribution of Term (Year) Learning Activities to		50.00
Total work load / 30 hr		

Measurement and Evaluation Techniques Used in the Course	

24	**ECTS / WORK LOAD TABLE**

25	**CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS**															
	PQ1	**PQ2**	**PQ3**	**PQ4**	**PQ5**	**PQ6**	**PQ7**	**PQ8**	**PQ9**	**PQ10**	**PQ11**	**PQ12**	**PQ13**	**PQ14**	**PQ15**	**PQ16**
ÖK1	4	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	4	4	3	0	0	3	0	0	0	0	0	0	0	0	0	0
ÖK3	4	4	3	0	0	3	0	0	0	0	0	0	0	0	0	0

ÖK4	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	3	3	3	0	0	3	0	0	0	0	0	0	0	0	0	0
ÖK6	4	4	4	0	0	4	0	0	0	0	0	0	0	0	0	0
ÖK7	4	4	4	0	0	3	0	0	0	0	0	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**